Komiya

Conversion of Examples—Revised

	B	C	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
70	wt%															
71		MW	5	6	7	8	9	10	11	12	15	16	17	18	19	20
72	nd		1.56637	1.56879	1.58242	1.54874	1.57211	1.57484	1.57474	1.55275	1.57944	1.57467	1.54122	1.58590	1.54708	1.57274
73	vd		73.3	71.5	70.0	71.6	70.1	70.2	70.7	71.6	69.1	69.0	74.9	69.3	74.1	71.5
74	P_2O_5	141.945	24.20	16.14	16.14	18.52	20.17	20.17	20.17	18.82	16.14	24.20	21.50	24.20	20.70	19.36
75	Al_2O_3	101.961	5.80	3.86	3.86	3.28	4.83	4.83	4.83	3.40	3.86	5.80	3.28	5.80	3.59	4.64
76	BaO	153.326				5.19										
77	SrO	103.619								3.38						
78	CaO	56.077													2.26	
79	MgO	40.304											2.21			
80	BaF_2	175.324	45.00	40.00	35.00	22.00	35.00	37.00	33.00	25.60	60.00	60.00	22.00	35.00	25.75	41.00
81	SrF_2	125.617	20.00	20.00	20.00	13.00	25.00	23.00	27.00	14.40	5.00	5.00	13.00	20.00	14.37	20.00
82	CaF_2	78.075				15.00				12.00			15.00		11.98	
83	MgF_2	62.302				8.00				6.40			8.00		6.39	
84	AlF_3	83.977			5.00											
85	GdF_3	214.245		5.00						1.00						
86	Gd_2O_3	362.498	5.00	15.00	20.00	15.00	5.00	10.00	5.00	15.00	15.00	5.00	15.00	15.00	14.97	8.00
87	La_2O_3	325.809						5.00								2.00
88	Y_2O_3	225.810							10.00							2.00
89	Yb_2O_3	394.078					10.00									3.00
90	total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
91	F	18.998	15.80	16.05	17.03	20.88	15.15	14.98	15.32	19.91	14.52	14.52	20.88	13.63	19.65	14.94
92	$MgF_2+CaF_2+SrF_2+BaF_2$		65.00	60.00	55.00	58.00	60.00	60.00	60.00	58.40	65.00	65.00	58.00	55.00	58.48	61.00
93	$Y_2O_3+La_2O_3+Gd_2O_3+Yb_2O_3$		5.00	15.00	20.00	15.00	15.00	15.00	15.00	15.00	15.00	5.00	15.00	15.00	14.97	15.00
94																

Komiya

Conversion of Examples—Revised

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
	wt%																
		MW	5	5	6	7	8	9	10	11	12	15	16	17	18	19	20
	nd			1.56637	1.56879	1.58242	1.54874	1.57211	1.57484	1.57474	1.55275	1.57044	1.57467	1.54122	1.58590	1.54708	1.57274
	vd			73.3	71.5	70.0	71.6	70.1	70.2	70.7	71.6	69.1	69.0	74.9	69.3	74.1	71.5
8	$Al(PO_3)_3$	263.897		30.0	20.0	20.0	17.0	25.0	25.0	25.0	17.6	20.0	30.0	17.0	30.0	18.6	24.0
9	$Ba(PO_3)_2$	295.271					10.0										
10	$Sr(PO_3)_2$	245.564									8.0						
11	$Ca(PO_3)_2$	198.022														8.0	
12	$Mg(PO_3)_2$	182.249												10.0			
13	BaF_2	175.324		45.0	40.0	35.0	22.0	35.0	37.0	33.0	25.6	60.0	60.0	22.0	35.0	25.8	41.0
14	SrF_2	125.617		20.0	20.0	20.0	13.0	25.0	23.0	27.0	14.4	5.0	5.0	13.0	20.0	14.4	20.0
15	CaF_2	78.075					15.0				12.0			15.0		12.0	
16	MgF_2	62.302					8.0				6.4			8.0		6.4	
17	AlF_3	83.977				5.0											
18	GdF_3	214.245			5.0						1.0						
19	Gd_2O_3	362.498		5.0	15.0	20.0	15.0	5.0	10.0	5.0	15.0	15.0	5.0	15.0	15.0	15.0	8.0
20	La_2O_3	325.809							5.0								2.0
21	Y_2O_3	225.810								10.0							2.0
22	Yb_2O_3	394.078						10.0									3.0
23	total			100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.2	100.0
24	MgF_2+CaF_2 +SrF_2+BaF_2			65.0	60.0	55.0	58.0	60.0	60.0	60.0	58.4	65.0	65.0	58.0	55.0	58.6	61.0
25	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
26	mol																
27		MW	5	5	6	7	8	9	10	11	12	15	16	17	18	19	20
28	nd			1.56637	1.56879	1.58242	1.54874	1.57211	1.57484	1.57474	1.55275	1.57044	1.57467	1.54122	1.58590	1.54708	1.57274
29	vd			73.3	71.5	70.0	71.6	70.1	70.2	70.7	71.6	69.1	69.0	74.9	69.3	74.1	71.5
30	$Al(PO_3)_3$	263.897	=E8/$C30	0.1137	0.0768	0.0768	0.0644	0.0947	0.0947	0.0947	0.0667	0.0758	0.1137	0.0644	0.1137	0.0705	0.0909
31	$Ba(PO_3)_2$	295.271					0.0339										
32	$Sr(PO_3)_2$	245.564									0.0326						
33	$Ca(PO_3)_2$	198.022														0.0404	
34	$Mg(PO_3)_2$	182.249												0.0549			
35	BaF_2	175.324	=E13/$C35	0.2567	0.2281	0.1996	0.1255	0.1996	0.2110	0.1882	0.1460	0.3422	0.3422	0.1255	0.1996	0.1472	0.2339
36	SrF_2	125.617	=E14/$C36	0.1692	0.1692	0.1692	0.1036	0.1990	0.1831	0.2149	0.1146	0.0398	0.0398	0.1035	0.1692	0.1146	0.1592
37	CaF_2	78.075					0.1921				0.1637			0.1921		0.1537	
38	MgF_2	62.302					0.1284				0.1027			0.1284		0.1027	
39	AlF_3	83.977				0.0595											
40	GdF3	214.245			0.0239						0.0047						
41	Gd_2O_3	362.498	=E19/$C41	0.0138	0.0414	0.0552	0.0414	0.0138	0.0276	0.0138	0.0414	0.0414	0.0138	0.0414	0.0414	0.0414	0.0221
42	La_2O_3	325.809							0.0153								0.0061
43	Y_2O_3	225.810								0.0443							0.0089
44	Yb_2O_3	394.078						0.0254									0.0076
45	total		=SUM(E30:E44)	0.5	0.5	0.5	0.7	0.5	0.5	0.6	0.7	0.5	0.5	0.7	0.5	0.7	0.5
46	F	18.9984	=(E35+E36+E37+E38)*2+(E39+E40)*3	0.8318	0.8447	0.8963	1.099	0.7973	0.7883	0.8063	1.0482	0.7641	0.7641	1.099	0.7177	1.0364	0.7861
47	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R

25	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
26	mol																
27		MW	5	5	6	7	8	9	10	11	12	15	16	17	18	19	20
28	nd			1.56637	1.56879	1.58242	1.54874	1.57211	1.57484	1.57474	1.55275	1.57944	1.57467	1.54122	1.58590	1.54708	1.57274
29	vd			73.3	71.6	70.0	71.6	70.1	70.2	70.7	71.6	69.1	69.0	74.9	69.3	74.1	71.5
30	$Al(PO_3)_3$	263.897	=E8/$C30	0.1137	0.0758	0.0758	0.0644	0.0947	0.0947	0.0947	0.0667	0.0758	0.1137	0.0644	0.1137	0.0705	0.0909
31	$Ba(PO_3)_2$	295.271					0.0339										
32	$Sr(PO_3)_2$	245.564									0.0326					0.0404	
33	$Ca(PO_3)_2$	198.022												0.0549			
34	$Mg(PO_3)_2$	182.249															
35	BaF_2	175.324	=E13/$C35	0.2667	0.2281	0.1996	0.1255	0.1996	0.2110	0.1882	0.1460	0.3422	0.3422	0.1255	0.1996	0.1472	0.2339
36	SrF_2	125.617	=E14/$C36	0.1592	0.1592	0.1592	0.1035	0.1990	0.1831	0.2149	0.1146	0.0398	0.0398	0.1035	0.1592	0.1146	0.1592
37	CaF_2	78.075					0.1921				0.1537			0.1921		0.1537	
38	MgF_2	62.302					0.1284				0.1027			0.1284		0.1027	
39	AlF_3	83.977				0.0595											
40	GdF3	214.245			0.0233						0.0047						
41	Gd_2O_3	362.498	=E19/$C41	0.0138	0.0414	0.0552	0.0414	0.0138	0.0276	0.0138	0.0414	0.0414	0.0138	0.0414	0.0414	0.0414	0.0221
42	La_2O_3	325.809							0.0153								0.0061
43	Y_2O_3	225.810								0.0443							0.0089
44	Yb_2O_3	394.078						0.0254									0.0076
45	total		=SUM(E30:E44)	0.5	0.5	0.5	0.7	0.5	0.5	0.6	0.7	0.5	0.5	0.7	0.5	0.7	0.5
46	F	18.9984	=(E35+E36+E37+E38)*2+(E39+E40)*3	0.8318	0.8447	0.8963	1.099	0.7973	0.7883	0.8063	1.0482	0.7641	0.7641	1.099	0.7177	1.0364	0.7861
47	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
48	proportionl divisions by weight																
49		MW	5	5	6	7	8	9	10	11	12	15	16	17	18	19	20
50	nd			1.56637	1.56879	1.58242	1.54874	1.57211	1.57484	1.57474	1.55275	1.57944	1.57467	1.54122	1.58590	1.54708	1.57274
51	vd			73.3	71.6	70.0	71.6	70.1	70.2	70.7	71.6	69.1	69.0	74.9	69.3	74.1	71.5
52	P_2O_5	141.945	=((E30*3/2)+E31+E32+E33+E34)*$C52	24.20	16.14	16.14	18.52	20.17	20.17	20.17	18.82	16.14	24.20	21.50	24.20	20.74	19.36
53	Al2O3	101.961	=(E30/2)*$C53	5.80	3.86	3.86	3.28	4.83	4.83	4.83	3.40	3.86	5.80	3.28	5.80	3.59	4.64
54	BaO	153.326					5.19										
55	SrO	103.619									3.38						
56	CuO	56.077														2.27	
57	MgO	40.304												2.21			
58	BaF_2	175.324	=E35*$C58	45.00	40.00	35.00	22.00	35.00	37.00	33.00	25.60	60.00	60.00	22.00	35.00	25.80	41.00
59	SrF_2	125.617	=E36*$C59	20.00	20.00	20.00	13.00	25.00	23.00	27.00	14.40	5.00	5.00	13.00	20.00	14.40	20.00
60	CaF_2	78.075					15.00				12.00			15.00		12.00	
61	MgF_2	62.302					8.00				6.40			8.00		6.40	
62	AlF_3	83.977				5.00											
63	GdF3	214.245			5.00						1.00						
64	Gd_2O_3	362.498	=E41*$C64	5.00	15.00	20.00	15.00	5.00	10.00	5.00	15.00	15.00	5.00	15.00	15.00	15.00	8.00
65	La_2O_3	325.809							5.00								2.00
66	Y_2O_3	225.810								10.00							2.00
67	Yb_2O_3	394.078						10.00									3.00
68	total		=SUM(E52:E67)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.2	100.0
69	F	18.9984	=E46*$C69	15.802	16.049	17.028	20.879	15.147	14.976	15.319	19.913	14.516	14.516	20.879	13.635	19.691	14.935
70	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R

47	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
48	proportionl divisions by weight																
49		MW	5	5	6	7	8	9	10	11	12	15	16	17	18	19	20
50	nd			1.56637	1.56879	1.58242	1.54874	1.57211	1.57484	1.57474	1.55275	1.57944	1.57467	1.54122	1.58590	1.54708	1.57274
51	vd			73.3	71.6	70.0	71.6	70.1	70.2	70.7	71.6	69.1	69.0	74.9	69.3	74.1	71.6
52	P_2O_5	141.945	=((E30*3/2)+E31+E32+E33+E34)*$C52	24.20	16.14	16.14	18.62	20.17	20.17	20.17	18.82	16.14	24.20	21.50	24.20	20.74	19.36
53	Al2O3	101.961	=(E30/2)*$C53	5.80	3.86	3.86	3.28	4.83	4.83	4.83	3.40	3.86	5.80	3.28	5.80	3.59	4.64
54	BaO	153.326					5.19										
55	SrO	103.619									3.38					2.27	
56	CaO	56.077												2.21			
57	MgO	40.304															
58	BaF_2	175.324	=E35*$C58	45.00	40.00	35.00	22.00	35.00	37.00	33.00	25.60	60.00	60.00	22.00	35.00	25.80	41.00
59	SrF_2	125.617	=E36*$C59	20.00	20.00	20.00	13.00	25.00	23.00	27.00	14.40	5.00	5.00	13.00	20.00	14.40	20.00
60	CaF_2	78.076					15.00				12.00			15.00		12.00	
61	MgF_2	62.302					8.00				6.40			8.00		6.40	
62	AlF_3	83.977				5.00											
63	GdF3	214.245			5.00						1.00						
64	Gd_2O_3	362.498	=E41*$C64	5.00	15.00	20.00	15.00	5.00	10.00	5.00	15.00	15.00	5.00	15.00	15.00	15.00	8.00
65	La_2O_3	325.809							5.00								2.00
66	Y_2O_3	225.810								10.00							2.00
67	Yb_2O_3	394.078						10.00									3.00
68	total		=SUM(E62:E67)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.2	100.0
69	F	18.9984	=E46*$C69	15.802	16.049	17.028	20.879	16.147	14.976	16.319	19.913	14.516	14.516	20.879	13.635	19.691	14.935
70	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
71	wt%																
72		MW	5	5	6	7	8	9	10	11	12	15	16	17	18	19	20
73	nd			1.56637	1.56879	1.58242	1.54874	1.57211	1.57484	1.57474	1.55275	1.57944	1.57467	1.54122	1.58590	1.54708	1.57274
74	vd			73.3	71.6	70.0	71.6	70.1	70.2	70.7	71.6	69.1	69.0	74.9	69.3	74.1	71.6
75	P_2O_5	141.945	=E52/E$68*100	24.20	16.14	16.14	18.62	20.17	20.17	20.17	18.82	16.14	24.20	21.50	24.20	20.70	19.36
76	Al_2O_3	101.961	=E53/E$68*100	5.80	3.86	3.86	3.28	4.83	4.83	4.83	3.40	3.86	5.80	3.28	5.80	3.59	4.64
77	BaO	153.326					5.19										
78	SrO	103.619									3.38					2.26	
79	CaO	56.077												2.21			
80	MgO	40.304															
81	BaF_2	175.324	=E58/E$68*100	45.00	40.00	35.00	22.00	35.00	37.00	33.00	25.60	60.00	60.00	22.00	35.00	25.75	41.00
82	SrF_2	125.617	=E59/E$68*100	20.00	20.00	20.00	13.00	25.00	23.00	27.00	14.40	5.00	5.00	13.00	20.00	14.37	20.00
83	CaF_2	78.076					15.00				12.00			15.00		11.98	
84	MgF_2	62.302					8.00				6.40			8.00		6.39	
85	AlF_3	83.977				5.00											
86	GdF_3	214.246			5.00						1.00						
87	Gd_2O_3	362.498	=E64/E$68*100	5.00	15.00	20.00	15.00	5.00	10.00	5.00	15.00	15.00	5.00	15.00	15.00	14.97	8.00
88	La_2O_3	325.809							5.00								2.00
89	Y_2O_3	225.810								10.00							2.00
90	Yb_2O_3	394.078						10.00									3.00
91	total		=SUM(E75:E90)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
92	F	18.998	=E69/E$68*100	15.80	16.05	17.03	20.88	16.15	14.98	16.32	19.91	14.52	14.52	20.88	13.63	19.65	14.94
93	MgF_2+CaF_2+SrF_2+BaF_2			65.00	60.00	55.00	58.00	60.00	60.00	60.00	58.40	65.00	65.00	58.00	55.00	58.48	61.00
94	Y_2O_3+La_2O_3+Gd_2O_3+Yb_2O_3			5.00	15.00	20.00	15.00	15.00	15.00	15.00	15.00	15.00	5.00	15.00	15.00	14.97	15.00